

# Signs of Intelligible Life in the Scientific Community: The Sciences Begin To Embrace Plain Language

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Anthrax! That one word evokes a strong rationale for communicating science in plain language. Joanne Locke reported that although the government has made progress, when the Food and Drug Administration (FDA) had an anthrax scare in four of its five DC-area mailrooms, explanatory e-mails had to be followed up with an “all hands” teleconference to clarify *presumptive positive* and define who needed to take ciprofloxacin.

Secretary of Health and Human Services Tommy Thompson underscored the importance of plain language when he said, “The information we provide can literally make the difference between life and death.”

As an example, Locke showed FDA’s current and proposed prescription-drug labels, where clearer communication could truly save lives by reducing some of the medical errors responsible for as many as 98,000 deaths per year.

Because several clinical-trial participants have died in the last few years, the informed-consent forms they signed also came under scrutiny. FDA joined with the

National Institutes of Health to develop plain-language templates to help researchers write better, clearer forms—another potentially life-saving application.

Although achieving plain language is an uphill battle among some FDA scientists, the trend is gaining momentum. Writing more clearly can be its own reward, allowing authors to reach a larger audience, encourage multidisciplinary breakthroughs, facilitate press coverage, and inspire the public.

Winning grant money is an especially important benefit. The National Science Foundation, which rejects two of three grant requests, recommends using a brief title suitable for the public press and writing proposals that are understandable to a scientifically or technically literate reader—not just experts in the field.

Lily Whiteman noted that the old attitude that “the importance of the work is inversely proportional to the number of people who can understand it” is outdated. Yet plain language is emphatically not “dumbing down”; it is reaching out to an expanded audience—an urgent need in our scientifically bereft society. The effects of the choices we make now about global warming and other vital issues will reach far into the future, so the general public, our lawmakers, and those who fund research must understand the science behind the choices.

Increasingly, civil and criminal litigation uses complex scientific evidence, which must be presented so that jurors can understand it. One O J Simpson juror lamented, “The chances of finding this blood are [one in] 6.7 billion. There are not 6.7 billion people on the earth, so what

does that mean?” Greta Van Susteren, CNN legal correspondent, clarified brilliantly: “If you want to get someone with this DNA, we are going to have to go to another galaxy.”

As Isaac Asimov said, “The whole premise of democracy is that it is safe to leave important questions to the court of public opinion—but is it safe to leave them to the court of public ignorance?”

Plain language is a culture change for many, but attitudes are changing simply because information overload compels us to compete for readers’ attention. Trying to absorb the onslaught of new scientific data is “like trying to drink from a fire hose”, according to Floyd Bloom, former editor of *Science*, so finding the highlights is absolutely required.

To that end, Whiteman offered 10 tips for writing a page-turner: (1) use a “what this study adds” box; (2) include structured abstracts with “loud and clear” conclusions; (3) use a clear, specific opener that gives context; (4) write short sentences and inject a human voice (when you tire readers, you lose them); (5) eliminate unnecessary jargon; (6) use the active voice; (7) use interesting examples; (8) don’t lose your passion; (9) revise, revise, revise (“Half as long is twice as good”, said former *Journal of the American Medical Association* Senior Editor Lester King); and (10) summarize articles in plain language.

With their humor and hands-on exercises, Joanne Locke and Lily Whiteman inspired us to champion plain language in our daily work. Their parting shot, from the venerable Quintilian: “One should aim not at being possible to understand, but at being impossible to misunderstand.” 